

Comparisons of Job Characteristics

Focus Occupation: Forensic Science Technicians (19-4092)

Associated Occupation: Microbiologists (19-1022)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 48

Focus Occupation: Forensic Science Technicians (19-4092)

Associated Occupation: Microbiologists (19-1022)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Biology	3.7	24.1	9.3	<<	Extensive education and/or training may be required
English Language	11.2	16.6	15.0	<	Expanded education and/or training may be required
Chemistry	4.8	15.2	13.1	<	Expanded education and/or training may be required
Medicine and Dentistry	3.7	10.7	6.0	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 85

Focus Occupation: Forensic Science Technicians (19-4092)

Associated Occupation: Microbiologists (19-1022)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Science	4.5	17.0	9.8	<<	Extensive development of skills in this area may be required
Reading Comprehension	10.7	15.5	13.1	<	A higher skill level may be required
Critical Thinking	10.8	15.0	14.1	0	Current skill level may be sufficient
Writing	9.2	14.8	13.5	0	Current skill level may be sufficient
Active Learning	8.7	14.7	11.2	<<	Extensive development of skills in this area may be required
Learning Strategies	7.2	12.2	8.5	<<	Extensive development of skills in this area may be required
Mathematics	6.2	11.0	8.5	<<	Extensive development of skills in this area may be required

Management of Personnel Resources	6.9	10.6	8.3	<	A higher skill level may be required
Systems Analysis	6.5	10.6	8.3	<	A higher skill level may be required
Systems Evaluation	6.4	9.9	7.2	<<	Extensive development of skills in this area may be required
Operations Analysis	5.0	8.8	4.8	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 93

Focus Occupation: Forensic Science Technicians (19-4092)

Associated Occupation: Microbiologists (19-1022)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Inductive Reasoning	10.2	18.0	14.3	<<	Extensive improvement in abilities may be required
Written Comprehension	11.0	16.5	14.1	<	Some improvement in abilities may be required
Problem Sensitivity	11.1	16.1	14.4	<	Some improvement in abilities may be required
Category Flexibility	9.0	16.0	12.0	<<	Extensive improvement in abilities may be required
Deductive Reasoning	10.6	15.7	15.1	0	Current ability level may be sufficient
Written Expression	9.8	15.5	12.8	<	Some improvement in abilities may be required
Near Vision	11.1	15.0	15.1	0	Current ability level may be sufficient
Information Ordering	9.9	13.9	12.9	0	Current ability level may be sufficient
Flexibility of Closure	7.8	13.6	16.0	>	Current ability level is likely sufficient
Fluency of Ideas	7.6	12.8	10.8	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 86

Focus Occupation: Forensic Science Technicians (19-4092)

Associated Occupation: Microbiologists (19-1022)

Work Activities	Exclusivity of Activity
Adhere to safety procedures	12
Advise governmental or industrial personnel	28
Analyze biological research, test, or analysis data	70
Analyze scientific research data or investigative findings	27
Classify plants, animals, or other natural phenomena	69

Collect scientific or technical data	30
Communicate technical information	4
Conduct analyses or tests of organic compounds	71
Conduct field research or investigative studies	52
Conduct laboratory research or experiments	57
Conduct standardized qualitative laboratory analyses	62
Conduct standardized quantitative laboratory analyses	62
Confer with engineering, technical or manufacturing personnel	25
Confer with scientists	54
Develop or maintain databases	30
Develop tables depicting data	33
Examine biological or other material specimens under microscope	73
Explain complex mathematical information	30
Follow infectious materials procedures	52
Follow microbiology procedures	74
Maintain records, reports, or files	5
Make decisions	24
Prepare reports	8
Prepare sample for laboratory testing, analysis, or microscopy	74
Prepare technical reports or related documentation	22
Record test results, test procedures, or inspection data	48
Understand properties or composition of drugs	64
Use biological research techniques	68
Use biological testing instruments	73
Use chemical testing or analysis procedures	54
Use computers to enter, access or retrieve data	3
Use hazardous materials information	35
Use health or sanitation standards	62
Use knowledge of investigation techniques	16
Use laboratory equipment	60
Use mathematical or statistical methods to identify or analyze problems	30
Use microscope	71
Use quantitative research methods	35
Use relational database software	26
Use scientific research methodology	21
Use spreadsheet software	18
Use word processing or desktop publishing software	17

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 60

Focus Occupation: Forensic Science Technicians (19-4092)
Associated Occupation: Microbiologists (19-1022)

Tools and Technologies	Exclusivity
Autoclave and sterilizer equipment and accessories	12
Cameras	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Laboratory centrifuges and accessories	13
Laboratory heating and drying equipment	13
Laboratory microscope slides and supplies	20
Laboratory mixing and stirring and shaking equipment and supplies	19
Laboratory washing and cleaning equipment	35
Lamps	19
Light and wave generating and measuring equipment	4
Network applications software	1
Power generators	16
Respiratory protection	6
Safety apparel	4
Safety footwear	21
Specimen collection and transport containers and supplies	14
Spectroscopic equipment	10
Temperature and heat measuring instruments	6
Viewing and observing instruments and accessories	4
Vision protection and accessories	3
Weight measuring instruments	7

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.